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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/845,158

05/01/2001

Shinichiro Iizuka

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08/25/2004

OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C.  
1940 DUKE STREET  
ALEXANDRIA, VA 22314

EXAMINER

TRAIL, ALLYSON NEEL


ART UNIT

PAPER NUMBER

2876

DATE MAILED: 08/25/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/845,158	IIZUKA ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Allyson N Trail	2876	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
  - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
  - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
  - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 04 May 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-9, 18-26 and 35-60 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6, 9, 18-25, 35-42, 45-47, 49-55, and 58-60 is/are rejected.
- 7) ☒ Claim(s) 7, 8, 26, 43, 44, 48, 56, and 57 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 May 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

## **DETAILED ACTION**

### ***Priority***

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### ***Amendment***

2. Receipt is acknowledged of the Amendment filed May 04, 2004.

### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-5, 9, 18-22, 24, 25, 35-39, 41, 42, 45-47, 49-52, 54, 55, and 58-60 are rejected under 35 U.S.C. 102(b) as being anticipated by Yasukawa et al (5,700,084).

Basting et al teaches the following in regards to claims 1, 2, 18, 19:

“In order to attain the object and other various objects, the present invention provides a light-source position adjustment device for aligning, with a predetermined standard direction, a direction in which a light source emits light and for positioning a light emission point on a predetermined standard position...”

The device comprises an “angular shift measuring means disposed in the first optical path and for detecting emission angle intensity distribution of the light source; position shift measuring means disposed in the second optical path and for detecting a

magnification image of the light source produced on an image plane of the magnification lens; a multi-axes stage unit for producing parallel movement and swinging movement of the light source; stage drive means for transmitting a drive signal to the multi-axes stage unit; and control means for determining, based on an output signal from the angular shift measuring means, an amount that a direction in which the light source emits light shifts from the predetermined standard direction and for determining, based on an output signal from the position shift measuring means, an amount that a light-generating point of the light source is displaced from the standard position, the control means outputting control signals to the stage drive means.”

“During a first set of processes S102 to S104, the axial angular shift between the light-emission direction of the light source 50 and the standard direction (Z-axis) is measured based on the optical bundle split toward the angular shift measurement pick-up element 36. The angular position (i.e., a setting angle) of the light source 50 is adjusted based on the measured results.”

It is shown in figure 2 that the light measure from the light source 50 is a spatial image I1. The spatial image is a far field pattern. (See column 6, lines 53-59).

Yasukawa et al teaches the following in regards to claims 3, 4, 20, 21, 37, 38, 50, and 51:

Figure 2 (discussed above) shows the spatial image diverging as it approaches the mirror 32. The measurement optical system 30 detects the diverging light emitted from the light source 50 and measures the angle. The measurement optical system 30

is used to position the multi-axes stage device 10, in which the light emitter 50 is coupled to.

Yasukawa et al teaches the following in regards to claims 5, 22, 39, and 52:

The multi-axes stage device fixes the optical component so that the light source stays in the desired position.

Yasukawa et al teaches the following in regards to claims 9 and 60:

Figure 2 also shows measuring a near field pattern 12 in order to determine the position of the light source. (Col. 7, lines 6-12).

Yasukawa et al teaches the following in regards to claims 24, 25, 41, 42, 54, and 55:

Figure 2 shows a lens 31, which substantially collimates the light output. The mirror 32 focuses the collimated light.

Yasukawa et al teaches the following in regards to claims 35-37, 46, 49, and 60:

See Yasukawa et al's teachings in regards to claims 1, 2, and 18. Additionally, Yasukawa et al teaches (in figure 2) a holding mechanism 10 configured to position the optical component. The holding mechanism is a multi-axes stage unit which is driven by a stage drive unit 20. The optical component is located on the stage unit.

Yasukawa et al teaches the following in regards to claims 45, 47, and 58:

Figure 2 shows a measurement pick-up element 36, which is configured to receive data of the outgoing angle from the FFP and optical measurement system. The holding mechanism is discussed above (multi-axes stage device 10).

Yasukawa et al teaches the following in regards to claim 59:

The controller 20 indicates to the multi-axes stage device where the stage should be positioned. Therefore, the controller is configured to control the fixing mechanism.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 6, 23, 40, 53 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yasukawa et al (5,700,084) in view of Jouaneh et al (5,367,140).

Yasukawa et al's teachings are discussed above. Yasukawa et al fails to specifically teach how the optical component is fixed in a particular position. Yasukawa et al also fails to teach at least one optical component comprising a means for collimating the light emitted from the light-emitting element.

Jouaneh et al teaches the following in regards to claims 6, 23, 40, 53:

"According to an exemplary embodiment of this invention, laser welding of components in an optical package is performed using a piezo-electric actuator to maintain the relative positions of two components during the laser welding process, including the cooling process that follows termination of the application of the laser energy to the package." (Col. 2, lines 11-17).

In view of Jouaneh et al's teachings it would have been obvious to one of ordinary skill in the art at the time the invention was made to use Jouaneh et al's method of laser welding to fix the components in a particular position. The method of

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laser welding optical components for in order to fix the components in a specific position is a common process. Lasers are extremely precise and therefor by using one the chance of error is minimal.

***Allowable Subject Matter***

7. Claims 7, 8, 26, 43, 44, 48, 56, and 57 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is an examiner's for allowance: Yasukawa et al teaches an optical source position adjustment device. The above identified prior art of record, taken alone, or in combination with any other prior art, fails to teach or fairly suggest the specific features of the present claimed invention. The step of detecting a near field pattern (NFP) of the light output from the optical component and positioning the optical component based on the NFP, wherein the step of positioning based on the NFP is performed before the step of positioning based on the FFP is not specifically taught by prior art. Prior art fails to teach the step of measuring the FFP of the light output from the optical component comprising measuring the FFP of the light output from a focusing lens configured to focus a collimated light output from the collimating lens, and the step of position comprises positioning the focusing lens. Moreover, one of ordinary skill in the art would not have been motivated to come to the claimed invention.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably

accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

***Response to Amendment***

8. Applicant's arguments and remarks were considered by the examiner and were not persuasive. The prior art used in the previous rejection is believed to meet the claimed invention. Yasukawa et al measures an outgoing angle and adjusts the light-emitting element based on the outgoing angle. Additionally, both a FFP and a NFP are measured to determine the appropriate position of the optical component. With further consideration, claimed limitations, which were indicated allowable in the previous office action if written in independent form, are believed to be met by Yasukawa et al. A 2<sup>nd</sup> non-final rejection is being issued due to the current rejection of claims which were previously only objected to.

***Conclusion***

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: Ohkubo et al (2004/0105474), Akhavain et al (2002/0000427), Sone et al (6,404,042), Chun (6,053,641), Shimizu (5,706,302), and Watanabe et al (5,098,185).



10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to *Allyson N. Trail* whose telephone number is (571) 272-2406. The examiner can normally be reached between the hours of 7:30AM to 4:00PM Monday thru Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael G. Lee, can be reached on (571) 272-2398. The fax phone number for this Group is (703) 872-9306.

Communications via Internet e-mail regarding this application, other than those under 35 U.S.C. 132 or which otherwise require a signature, may be used by the applicant and should be addressed to [[allyson.trail@uspto.gov](mailto:allyson.trail@uspto.gov)].

*All Internet e-mail communications will be made of record in the application file. PTO employees do not engage in Internet communications where there exists a possibility that sensitive information could be identified or exchanged unless the record includes a properly signed express waiver of the confidentiality requirements of 35 U.S.C. 122. This is more clearly set forth in the Interim Internet Usage Policy published in the Official Gazette of the Patent and Trademark on February 25, 1997 at 1195 OG 89.*

Allyson N. Trail  
Patent Examiner  
Art Unit 2876  
August 20, 2004

*Jared J. Fureman*  
**JARED J. FUREMAN**  
**PRIMARY EXAMINER**